

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment



December XX, 2012

Christopher Potter,
Director Utilities and Power Plant Operation
Architect of the Capitol
25 E Street SE
Washington, DC 20515

Dear Mr. Potter:

Re: **Permit No. 6577 Plantwide Applicability Limits (PALs) for NO_x and PM_{2.5}**

Pursuant to §208 of Title 20 of the District of Columbia Municipal Regulations (20 DCMR), an existing major stationary source may obtain a Plantwide Applicability Limit (PAL) permit for the precursors of ozone, i.e. NO_x and VOCs, and direct emissions of PM_{2.5} and its precursors from the District Department of the Environment (“the Department”) because the District of Columbia is classified as an ozone and PM_{2.5} nonattainment area and is not classified as an extreme nonattainment for ozone. The application of the Architect of the Capitol (AOC) (“Permittee” or “Owner or Operator”) to obtain a PAL permit for NO_x and direct emissions of PM_{2.5} for the Capitol Power Plant (CPP) facility, located at 25 E Street SE, per the application, dated February 10, 2012 and additional information submitted on March 14, 2012, March 28, 2012, July 11, 2012, July 20, 2012, and October 23, 2012 is hereby granted subject to the following conditions:

I. General Requirements:

- a. The permit shall comply with the applicable air pollution control requirements of 20 DCMR.
- b. This permit expires on December XX, 2017 (20 DCMR 200.4). If continued operation of the facility under the PALs after this date is desired, the owner or operator shall submit an application for renewal at least 6 months before expiration of this permit, but not earlier than 18 months before the date of permit expiration. [20 DCMR 208.11 and 20 DCMR 208.17]
- c. Any PAL renewal application shall contain the information in 20 DCMR 208.18(a) through (e).
- d. At the time of renewal, adjustments of the PAL shall be done in accordance with 20 DCMR 208.19 through 20 DCMR 208.23, as applicable.



- e. If the Permittee applies to renew a PAL in accordance with Conditions I(b) and (c) before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period, but shall remain in effect until final action is taken by the Department on the application for renewal. [20 DCMR 208.10(c)]
- f. Once a PAL expires or is not renewed in accordance with the requirements of 20 DCMR 208.16, the Permittee is subject to the requirements of 20 DCMR 208.15. [20 DCMR 208.10(e) and 208.15]
- g. The Permittee shall allow authorized officials of the Department, upon presentation of identification, to [20 DCMR 101 and 20 DCMR 302.3]:
 - 1. Enter upon the Permittee's premises where a source or emission unit is located, an emissions related activity is conducted, or where records required by this permit are kept;
 - 2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
 - 3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - 4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement.
- h. Any physical change in or change in the method of operation of the facility, as long as it maintains its source-wide emissions below the PAL levels, meets the requirements of 20 DCMR 208, and complies with this permit is not a major modification for the PAL pollutants covered by this permit and does not have to be approved through the New Source Review program in 20 DCMR 204. [20 DCMR 208.3]
- i. Failure to comply with the provisions of this permit may be grounds for suspension or revocation. [20 DCMR 202.2]
- j. Within twelve (12) months of issuance of the PAL permit, the Permittee shall submit a complete application to modify the facility's Title V operating permit or a supplemental application to a pending application, to include the requirements of this permit [20 DCMR 301.1(a)(3)].

II. Emission Limitations:

- a. Permittee shall not exceed the plant-wide applicability limits (PAL) in Table-1 below. [20 DCMR 208.9 and 20 DCMR 208.10(a) and (b)]

Table-1

PAL Pollutant	PAL Allowable Emissions (tons per rolling 12 months)
Oxides of Nitrogen (NO _x)	196.7
Particulate matter less than 2.5 microns in diameter (PM _{2.5})	35.4

- b. At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant that occur during the PAL effective period creditable as decreases for purposes of offsets under 40 CFR § 51.165(a)(3)(ii) unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be credible in the absence of the PAL. [20 DCMR 208.7]

III. Operational Limitations:

- a. The Permittee shall continue to comply with all applicable federal and District requirements, emission limitations, and work practice requirements that were established prior to the effective date of this PAL permit, excluding any enforceable emissions limitations that the Permittee used to avoid applicability with the requirements of the District's new source review (NSR) program under § 204 and 206, except as modified through normal permit modification processes under Chapter 2 or Chapter 3 of 20 DCMR. [20 DCMR 208.4]

Note that this condition does not exempt the facility from complying with applicable federal or District requirements identified or established at any time following issuance of this permit.

- b. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the monitoring equipment and the PAL emission units in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source. [20 DCMR 201]

IV. Monitoring and Testing Requirements:

- a. The Permittee shall establish and implement, for all emission units, a monitoring system that accurately determines plantwide emissions of NO_x and PM_{2.5} in terms of mass per unit of time. [20 DCMR 208.10(g) and 20 DCMR 208.24]
 1. Any such monitoring system must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation;
 2. The information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit;
 3. The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in Conditions IV(b) through (i);
 4. Notwithstanding Condition IV(a)(3), the Permittee may employ an alternative monitoring approach that meets the requirements of Condition IV(a) if approved by the Department; and
 5. Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.
- b. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in Conditions IV(c) through (i) [20 DCMR 208.25]:
 1. Mass balance calculations for activities using coatings or solvents and sulfur dioxide calculations for fuel burning sources;
 2. CEMS;
 3. CPMS or PEMS; or
 4. Emission factors.
- c. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements [20 DCMR 208.26]:
 1. Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;

2. Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and
 3. Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Department determines there is site-specific data or a site-specific monitoring program to support another content within the range.
- d. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements [20 DCMR 208.27 and 20 DCMR 501]:
1. CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B;
 2. CEMS must sample, analyze, and record data at least every fifteen (15) minutes while the emissions unit is operating; and
 3. CEMS must comply with applicable monitoring requirements in 40 CFR 60.13
- e. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements [20 DCMR 208.28]:
1. The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operations of the emissions unit; and
 2. Each CPMS or PEMS must sample, analyze, and record data at least every fifteen (15) minutes, or at another less frequent interval that the Department approves, while the emissions unit is operating.
- f. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
1. All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development [20 DCMR 208.29(a)];
 2. The emissions unit shall operate within the designated range of use for the emission factor, if applicable [20 DCMR 208.29(b)]; and

Architect of the Capitol

Permit No. 6577 PAL for NO_x and PM_{2.5}

December XX, 2012

Page 6

3. If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within six (6) months of PAL permit issuance unless the Department determines that testing is not required [20 DCMR 208.29(c)]. See Condition IV(l)(1) for the units required to be tested.
4. For each emissions test performed pursuant to Condition IV(f)(3), the Permittee shall conduct the performance tests to develop required emission factors and shall furnish the Department with a written report of the results of such performance tests in accordance with the following requirements [20 DCMR 502]:
 - A. The test protocol shall be submitted to the following address a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.
 - B. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Permittee shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.
 - C. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. The test report shall be submitted to the following address:

Chief, Compliance and Enforcement Branch
Air Quality Division
1200 First Street NE, 5th Floor
Washington DC 20002

- D. The final report of the results shall include the emissions test report (including raw data from the test), a summary of the test results, a proposed emission factor based on the test results, and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:
 - i. A statement that the owner or operator has reviewed the report from the emissions testing firm and agrees with the findings;
 - ii. Permit number(s) and condition(s) which are the basis for the testing;

- iii. A summary of results with respect to each permit condition, including any proposed emission factors; and
 - iv. A statement of compliance or non-compliance with each permit condition.
- g. A source owner or operator must record and report maximum potential to emit without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit. [20 DCMR 208.30] See Conditions IV(n) and IV(o) for the specific missing data procedures specified in the permit.
- h. Notwithstanding the requirements in Conditions IV(c) through (g), where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, unless a default value for determining compliance with the PAL is specified elsewhere in this permit, reasonably estimating the highest potential emissions of the emission unit at such operating point(s), operation of the emissions unit at those operating conditions where there is no correlation between monitored parameter(s) and the PAL pollutant emissions shall be considered a violation of the PAL. [20 DCMR 208.31]
- i. All data used to establish the PAL pollutants must be revalidated through performance testing or other scientifically valid means approved by the Department. Such testing must occur at least once every five (5) years after issuance of the PAL. [20 DCMR 208.32]
- j. The Permittee's emission calculations, for compliance purposes, must include any noncompliant emissions in excess of any emissions limitations, emissions associated with startup and shutdown, fugitive emissions, to the extent quantifiable, and emissions associated with upsets or malfunctions. [20 DCMR 208.10(d)]
- k. Specific Equipment Monitoring Requirements for NO_x PAL Pollutant:
- 1. As part of the monitoring procedures included in the monitoring system required in Condition IV(a), the Permittee shall use continuous emissions monitoring systems (CEMS) to monitor the NO_x emissions from boilers 1-7, to ensure compliance with Condition II(a). [20 DCMR 208.25(b) and 20 DCMR 201] The CEMS shall meet the requirements of Condition IV(d).

2. Emissions from all other units shall be monitored in accordance with a monitoring system established in accordance with Condition IV(a) and the specific requirements of this permit.
1. Specific Equipment Monitoring Requirements for PM_{2.5} PAL Pollutant:
 1. The Permittee shall conduct stack testing as outlined in Condition IV(f)(3) and (4) for all boilers 1 through 7 to determine unit-specific emission factors.
 2. Emissions from all other units shall be monitored in accordance with a monitoring system established in accordance with Condition IV(a) and the specific requirements of this permit.
- m. Compliance with the PAL emission limitations shall be determined as follows: [20 DCMR 208.6(a)]
 1. For each month during the PAL effective period after the first twelve (12) months of establishing a PAL, the Permittee shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous twelve (12) consecutive months is less than the PAL (a twelve (12) month average, rolled monthly); and
 2. For each month during the first eleven (11) months from the PAL effective date, the Permittee shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.
 3. The Permittee shall calculate monthly emissions of NO_x for existing sources as follows: [20 DCMR 201 and 208.10(f)]
 - A. For boilers 1 through 7, the Permittee shall monitor the amount of fuel consumed on a continuous basis for each unit. Emissions will be computed using the following formula with monthly fuel consumption data and monthly average emissions factors, as measured by the corresponding stack CEMS. For boilers 1 and 2, the monthly average CEMS emission factor from the shared East Stack shall be used in calculating each boiler's emissions. The monthly average CEMS emission factor from the shared West Stack shall be used in calculating emissions from boilers 3 through 7.

$$NO_x = fuel \times EF \times HHV \times 1/2000$$

Where:

NO_x = monthly emissions of NO_x -- (tons/month)
Fuel = amount of fuel combusted in a month -- (tons, scf or gallons/month)
EF = monthly average CEMS NO_x emission factor -- (lb/MMBTU)
HHV = high heating value of fuel -- (MMBTU/ton, scf or gallon)
1/2000 = conversion from pounds to tons -- (tons/pound)

B. For miscellaneous combustion sources (e.g., engines and coal car burners), monthly emissions shall be calculated using the following emission factors in combination with monthly hours of operation or monthly fuel consumption data. Emissions shall be calculated from the following specifically identified units as follows:

- i. Coal car burners – The owner or operator shall monitor the hours of operation on a monthly basis through equipment usage logs. Monthly emissions from the coal car burners shall be calculated using an emissions factor of 20 lbs NO_x per 1,000 gallons of oil (AP-42 Section 1.3, May 2010), a fuel usage rate of 54 gallons per hour, and the total monthly fuel throughput during a given month, calculated using the monthly total hours of operation.
- ii. Air compressor – The owner or operator shall monitor the hours of operation on a continuous basis through the use of an hour meter. Monthly emissions from the air compressor shall be calculated using an emissions factor of 4.41 lbs NO_x per MMBTU (AP-42 Section 3.3, October 1996), a heating value of 140,000 BTUs per gallon of oil, a fuel usage rate of 5.3 gallons per hour, and the total monthly fuel throughput during a given month, calculated using the monthly total hours of operation.
- iii. Emergency Fire Pump – The owner or operator shall monitor the hours of operation on a continuous basis through the use of an hour meter. Monthly emissions from the emergency fire pump shall be calculated using an emissions factor of 0.01 lb NO_x per hp-hr (Manufacturer emissions datasheet), the rating of the fire pump, and the hours of operation during the given month.
- iv. Emergency Generator – The owner or operator shall monitor the hours of operation on a continuous basis through the use of an hour meter. Monthly emissions from the emergency generator shall be calculated using an emissions factor of 3.2 lb NO_x per MMBTU (AP-42 Section 3.4, October 1996), a heating value of 140,000 BTUs per gallon of oil, a fuel usage rate of 104 gallons per hour, and the total monthly

throughput during a given month calculated using the monthly total hours of operation.

4. The Permittee shall calculate monthly emissions of PM_{2.5} for existing sources as follows: [20 DCMR 201 and 208.10(f)]
 - A. For the combustion sources listed below, monthly PM_{2.5} emissions shall be calculated using the following emission factors and methods:
 - i. Coal Car Burners –The owner or operator shall monitor the hours of operation on a monthly basis through equipment usage logs. Monthly emissions from the coal car burners shall be calculated using an emissions factor of 2.13 lb PM_{2.5} per 1,000 gallons of oil (AP-42 Section 1.3, May 2010), a fuel usage rate of 54 gallons per hour, and the total monthly fuel throughput during a given month, calculated using the monthly total hours of operation.
 - ii. Air Compressor – The owner or operator shall monitor the hours of operation on a continuous basis through the use of an hour meter. Monthly emissions from the air compressor shall be calculated using an emissions factor of 0.31 lb PM_{2.5} per MMBTU (AP-42 Section 3.3, October 1996), a heating value of 140,000 BTUs per gallon of oil, a fuel usage rate of 5.3 gallons per hour, and the total monthly fuel throughput during a given month, calculated using the monthly total hours of operation.
 - iii. Emergency Fire Pump – The owner or operator shall monitor the hours of operation on a continuous basis through the use of an hour meter. Monthly emissions from the emergency fire pump shall be calculated using an emissions factor of 5.07 E-04 lb PM_{2.5} per hp-hr (Manufacturer's specification), the rating of the fire pump, and the hours of operation during a given month.
 - iv. Emergency Generator – The owner or operator shall monitor the hours of operation on a continuous basis through the use of an hour meter. Monthly emissions from the emergency generator shall be calculated using an emissions factor of 0.0556 lb PM_{2.5} per MMBTU (AP-42 Section 3.4, October 1996), a heating value of 140,000 BTUs per gallon of oil, a fuel usage rate of 104 gallons per hour, and the total monthly fuel throughput during a given month, calculated using the monthly total hours of operation.
 - B. For boilers 1 and 2, the owner or operator shall monitor the amount of each fuel consumed on a continuous basis.

- i. When burning coal, monthly PM_{2.5} emissions shall be calculated using emission factors developed from PM_{2.5} stack testing required under Conditions IV(f)(3) and (4) and IV(l)(1), the most recent heating value determined through quarterly coal sampling, and the monthly total coal throughput. Until such time as stack testing is performed and site-specific emissions factors are developed, emissions shall be calculated using an emissions factor of 0.032 lb PM_{2.5} filterable per ton of coal (AP-42 Section 1.1, September 1998) and 0.04 lb PM_{condensable} per MMBTU (AP-42 Section 1.1, September 1998).
 - ii. When burning natural gas, monthly PM_{2.5} emissions shall be calculated using emission factors developed from PM_{2.5} stack testing required under Condition IV(f)(3) and (4), a heating value of 1,020 BTU per SCF, and the monthly total natural gas throughput. Until such time as stack testing is performed and site-specific emission factors are developed, emissions from boilers 1 and 2 shall be calculated using an emissions factor of 7.6 lb PM_{2.5} per MMSCF (AP-42 Section 1.4, July 1998).
- C. For boilers 3 through 7, the owner or operator shall monitor the amount of each fuel consumed on a continuous basis.
 - i. When burning fuel oil, monthly emissions from boilers 3 through 7 shall be calculated using emission factors developed from PM_{2.5} stack testing required under Condition IV(f)(3) and (4) and IV(l)(1), a heating value of 140,000 BTU per gallon, and the monthly fuel oil consumption. Until such time as stack testing is performed and site-specific emission factors are developed, emissions from boilers 3 through 7 shall be calculated using an emissions factor of 1.55 lb per 1,000 gallons of oil (AP-42 Section 1.3, May 2012).
 - ii. When burning natural gas, monthly emissions from boilers 3 through 7 shall be calculated using emission factors developed from PM_{2.5} stack testing required under Conditions IV(f)(3) and (4) and IV(l)(1), a heating value of 1,020 BTU per SCF, and the monthly natural gas throughput. Until such time as stack testing is performed and site-specific emission factors are developed, emissions from boilers 3 through 7 shall be calculated using an emissions factor of 7.6 lb per MMSCF (AP-42 Section 1.4, July 1998).
- D. For ash handling, the owner or operator shall monitor the ash throughput on a monthly basis through monitoring of monthly coal throughput.

Emissions shall be calculated according to the procedures in AP-42 Section 13.2.4 using the following formula:

$$PM_{2.5} = \frac{EF \times ash \times coal \times HHV \times N \times (1 - \eta)}{HI \times 2000}$$

Where:

- PM_{2.5} = Emissions of PM_{2.5} (tons)
- EF = PM_{2.5} emission factor (1.01 E-5) (lb/ton)
- ash = Ash throughput (0.6) (ton/hr)
- coal = Coal consumption in Boilers 1 and 2 (tons)
- HHV = High heat value from quarterly sampling (MMBTU/ton)
- N = Numbers of transfers (1) (unitless)
- η = Baghouse control efficiency (98%) (%)
- HI = Rated heat input of Boilers 1 and 2 on coal (160) (MMBTU/hr)

- E. For coal handling, the owner or operator shall monitor the amount of coal delivered for each coal delivery. Emissions shall be calculated according to the procedures in AP-42 Section 13.2.4 using the following formula:

$$PM_{2.5} = EF \times coal \times N \times \frac{1}{2000}$$

Where:

- PM_{2.5} = Emissions of PM_{2.5} (tons)
- EF = PM_{2.5} emission factor (1.24 E-4) (lb/ton)
- coal = Amount of coal delivered during the given month (tons)
- N = Numbers of transfers (3) (unitless)

- F. For the cooling towers, the owner or operator shall monitor the water flow rate for each cooling tower, the total dissolved solids, and hours of operation once per week. Emissions shall be calculated according to the procedures in AP-42 Section 13.4 using the following formula:

$$PM_{2.5} = \frac{TDS \times 3.78 \times CWFR \times L \times T \times 60}{453.6 \times 10^6 \times D}$$

Where:

- PM_{2.5} = Emissions of PM_{2.5} (tons)
- TDS = Total dissolved solids concentration (ppm)
- CWFR = Circulating water flow rate (gpm)
- L = Draft loss factor (0.8865) (lb/1,000 gal)
- T = Time (hours)
- D = density of water (8.345 lb/gal)

n. Missing data procedures for the NO_x PAL shall be as follows: [20 DCMR 201]

1. CEMS emissions missing data procedures are as follows:

- A. Unless the CEMS is rendered inoperable for more than ten percent (10%) of a given month, no data filling procedures are required in computing the monthly average emission rate. In the event that the CEMS is inoperable for more than ten percent (10%) of the month, the Permittee shall calculate an average of the five (5) highest NO_x hourly emission rates from the stack in the month. The calculated average shall be input for the missing data during periods when the boiler associated with the stack was operational.
- B. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.

2. Fuel usage missing data procedures are as follows:

- A. If fuel usage data which is monitored continuously is missing or invalid (as determined through review of plant records), data shall be filled for each day of missing/invalid data. If less than ten percent (10%) of days for a given month have missing data, the missing days shall be filled using the average of the days immediately preceding and following the missing period. If ten percent (10%) or more of days for a given month are missing data, the data shall be filled using the maximum daily fuel usage recorded during that month.
- B. If fuel usage data which is monitored monthly is missing, data shall be filled for the entire missing month with the maximum monthly fuel usage for the given unit during the preceding 12-month period.
- C. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.

3. Hours of operation missing data procedures are as follows:

- A. If hours of operation data which is monitored continuously is missing or invalid (as determined through review of plant records), data shall be filled for each day of missing/invalid data. If less than ten percent (10%) of days for a given month have missing data, the missing days shall be filled using the average of the days immediately preceding and following the missing period unless other data (i.e., fuel consumption) exists such that it

is known the source was not operational. If ten percent (10%) or more of days for a given month are missing data, the data shall be filled using the maximum daily hours of operation recorded during that month.

- B. If hours of operation data for sources which are not monitored continuously is missing, data shall be filled for a missing month of data with the maximum hours of operation in a month over the preceding 12-month period.
 - C. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
- o. Missing data procedures for PM_{2.5} PAL shall be as follows: [20 DCMR 201]
- 1. Fuel usage missing data procedures are as follows:
 - A. If fuel usage data which is monitored continuously is missing or invalid (as determined through review of plant records), data shall be filled for each day of missing/invalid data. If less than ten percent (10%) of days for a given month have missing data, the missing days shall be filled using the average of the days immediately preceding and following the missing period. If ten percent (10%) or more of days for a given month are missing data, the data shall be filled using the maximum daily fuel usage recorded during that month.
 - B. If fuel usage data which is monitored monthly is missing, data shall be filled for the entire missing month with the maximum monthly fuel usage for the given unit during the preceding 12-month period.
 - C. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
 - 2. Hours of operation missing data procedures are as follows:
 - A. If hours of operation data which is monitored continuously is missing or invalid (as determined through review of plant records), data shall be filled for each day of missing/invalid data. If less than ten percent (10%) of days for a given month have missing data, the missing days shall be filled using the average of the days immediately preceding and following the missing period unless other data (i.e., fuel consumption) exists such that it is known the source was not operational. If ten percent (10%) or more of

days for a given month are missing data, the data shall be filled using the maximum daily hours of operation recorded during that month.

- B. If hours of operation data which is not monitored continuously is missing, data shall be filled for a missing month of data with the maximum hours of operation in a month over the preceding twelve (12) month period.
 - C. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
3. Coal delivery missing data procedures are as follows:
- A. If the amount of coal delivered is missing, data shall be filled using the plant-wide coal consumption during the given month.
 - B. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
4. Total dissolved solids concentration missing data procedures are as follows:
- A. If data is missing for a single week, data shall be filled using the average of the weeks immediately preceding and following the missing data for the given unit.
 - B. If data is missing for two or more consecutive weeks for only one unit, data for the other unit for the given weeks shall be used to fill the data.
 - C. If data is missing for two or more consecutive weeks for both units concurrently, data shall be filled using the maximum test result from the preceding twelve (12) month period for each of the given units.
 - D. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
5. High heat content of coal and fuel oil shall be monitored on a quarterly basis and emissions calculations demonstrating compliance shall use the most recent test results.
- A. Missing data shall be filled using the maximum test result for a given fuel from the preceding four valid test results.

- B. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
6. Cooling water flowrate missing data procedures are as follows:
- A. If cooling water flowrate data is missing for a single week, data shall be filled using the average of the weeks immediately preceding and following the missing data.
 - B. If cooling water flowrate data is missing for two or more consecutive weeks, data shall be filled using the maximum weekly average flowrate from the current calendar quarter.
 - C. Instances where the facility needs to use missing data substitutions as described above shall be reported as deviations pursuant to the requirements of Condition V.
- p. The Department reserves the right to require additional testing to establish site-specific emission factors for units added or modified after issuance of this permit and that meet the requirements of Condition IV(f)(3).

V. Record Keeping Requirements:

The following record keeping requirements shall be followed and recorded information shall be maintained at the facility and made available to the Department upon written or verbal request:

- a. Permittee shall keep onsite all records required under this permit (such records may be retained in an electronic format). [20 DCMR 208.10(h)]
- b. Permittee shall retain a copy of all records necessary to determine compliance with any requirement of 20 DCMR 208 and of this permit, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five (5) years from the date of such record. [20 DCMR 208.33]
- c. Permittee shall retain a copy of the following records for the duration of the PAL effective period plus five (5) years: [20 DCMR 208.34]
 - 1. A copy of each PAL permit application and any applications for revisions to the PALs; and
 - 2. Each annual certification of compliance pursuant to 20 DCMR Chapter 3 and the data relied on in certifying the compliance.

VI. Reporting Requirements:

- a. Permittee shall submit semi-annual monitoring reports and prompt deviation reports to the Department in accordance with the applicable Title V operating permit program in 20 DCMR Chapter 3. The reports shall meet the following requirements: [20 DCMR 208.10(i) and 20 DCMR 208.35(a) through (d)]
 1. The semiannual report shall be submitted to the Department within thirty (30) days of the end of each reporting period (ie. by July 30 and January 30, each year). This report shall contain the following information:
 - A. The identification of owner and operator and the permit number;
 - B. Total annual emissions (tons per year) based on a twelve (12) month rolling total for each month in the reporting period recorded pursuant to Conditions V(b) for NO_x and PM_{2.5} PAL Pollutants;
 - C. All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly, semi-annual and annual PAL pollutant emissions;
 - D. A list of any emissions units modified or added to the facility during the preceding six (6) month period;
 - E. The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero (0) and span checks), and any corrective action taken;
 - F. A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by the methods included in the permit, as provided by Condition IV(g) as well as Condition IV(m)(3) for the NO_x PAL pollutant and Condition IV(m)(4) for the PM_{2.5} PAL pollutant; and
 - G. A signed statement by the responsible official (as defined by the applicable Title V operating permit program in chapter 3 of 20 DCMR) certifying the truth, accuracy, and completeness of the information provided in the report.

2. The Permittee shall promptly submit reports of any deviations or exceedances of the PAL requirements, including periods where no monitoring is available, except as follows:
 - A. Prompt reporting of missing fuel use data, if less than 10 percent of the days for a given month, is not required.
 - B. Prompt reporting of missing continuously monitored hours of operation data, if less than 10 percent of the days for a given month, is not required.
 - C. Prompt reporting of total dissolved solids concentration data, if missing for only a single week, or two or more consecutive weeks for only one unit, is not required.
 - D. Prompt reporting of cooling water flowrate data, if missing for only a single week, is not required.

Note that an exemption from prompt reporting in this permit condition does not exempt the Permittee from submitting the exempted deviations in the semiannual report required in Condition VI(a)(1).

3. The deviation reports required under Condition VI(a)(2) shall be submitted in accordance with 20 DCMR 302.1(c)(3)(C) and shall contain the following information:
 - A. The identification of the owner and operator and the permit number;
 - B. The PAL requirement that experienced the deviation or that was exceeded;
 - C. Emissions resulting from the deviation or the exceedance;
 - D. The cause and estimated/expected duration of excess emissions [20 DCMR 500.1]; and
 - E. A signed statement by the responsible official (as defined by the applicable Title V operating permit program in chapter 3 of 20 DCMR) certifying the truth, accuracy, and completeness of the information provided in the report.
4. The Permittee shall submit to the Department the results of any revalidation test or method within 60 days after completion of such test or method.

Architect of the Capitol
Permit No. 6577 PAL for NO_x and PM_{2.5}
December XX, 2012
Page 19

If you have any questions, please me at (202) 535-1747 or Abraham T. Hagos at (202) 535-1354.

Sincerely,

Stephen S. Ours, P.E.
Chief, Permitting Branch

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